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WHAT IS CLAIMED IS:

1. A sensor array comprising:
a substrate; and
a plurality of piezoelectric oscillators fixed on a main surface of the substrate in a matrix form, each of the piezoelectric oscillators comprising:
a plurality of piezoelectric layers laminated in a direction parallel to the main surface of the substrate;
inner electrodes disposed between the plurality of piezoelectric layers; and
outer electrodes formed on end faces of the plurality of piezoelectric layers.

2. A method for manufacturing the sensor array according to Claim 1, comprising the steps of:
forming a multi-layer structure in which a plurality of piezoelectric layers and a plurality of inner electrodes are laminated;
forming a motherboard by cutting the multi-layer structure in the laminated direction;
forming outer electrodes on both main surfaces of the motherboard;
fixing the motherboard on a main surface of a

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cutting the motherboard to yield the plurality of piezoelectric oscillators.

3. An ultrasonic diagnostic apparatus comprising an ultrasonic probe, wherein the ultrasonic probe comprises the sensor array according to Claim 1.

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